turbogenerator speed and low turbogenerator combustion temperature utilizing a flexure valve or multiple flexure valves that have their flow conductances adjusted as a function of fuel pressure. These flexure valves use no solenoid, use no electrical power, require no conditioning and control circuitry. They are controlled and powered solely by the pressure of the liquid fuel used by the injector nozzles.

A2

In another embodiment, the present invention provides a liquid fuel pressurization and control system that controls the torque and speed of the utilizes either a helical flow pump, or a helical flow pump followed by a gear pump, to pressurize the liquid fuel to precisely the pressure required by a turbogenerator combustor's injection nozzles with no subsequent valve based subregulation.

In the Claims

Please add new claims 20 - 40 as shown below and on the sheets attached hereto pursuant to 37 CFR 1.121

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20. A method for controlling a turbogenerator to provide a required amount of power, comprising:

selecting a turbogenerator speed to produce the required amount of power;

selecting a fuel pressure to maintain the required turbogenerator speed; and

controlling a fuel pump to provide the selected fuel pressure to a turbogenerator combustor.

21. The method of claim 20, wherein controlling the fuel pump comprises:

controlling a torque of the pump to provide the selected fuel pressure to the turbogenerator combustor.

A3

22. The method of claim 20, wherein controlling the fuel pump comprises:

controlling a speed of the pump to provide the selected fuel pressure to the turbogenerator combustor.

23. The method of claim 20, wherein selected the fuel pressure comprises:

determining a combustion air pressure provided by a turbogenerator air compressor to the combustor in accordance with the selected turbogenerator speed.

24. The method of claim 23, wherein selected the fuel pressure comprises:

selecting the fuel pressure in accordance with the determined combustion air pressure.

25. The method of claim 24, wherein selecting the speed comprises:

selecting a turbine temperature in accordance with the selected speed to produce the required amount of power.

26. The method of claim of 25, wherein the turbine temperature is a turbine exhaust temperature.

27. The method of claim 21, wherein selected the fuel pressure comprises:

determining a combustion air pressure provided by a turbogenerator air compressor to the combustor in accordance with the selected turbogenerator speed.

28. The method of claim 27, wherein selected the fuel pressure comprises:

A3 selected the fuel pressure in accordance with the determined combustion air pressure.

29. The method of claim 28, wherein selecting the speed comprises:

selecting a turbine temperature in accordance with the selected speed to produce the required amount of power.

30. The method of claim of 29, wherein the turbine temperature is a turbine exhaust temperature.

31. The method of claim 22, wherein selected the fuel pressure comprises:

determining a combustion air pressure provided by a turbogenerator air compressor to the combustor in accordance with the selected turbogenerator speed.

32. The method of claim 31, wherein selected the fuel pressure comprises:

selected the fuel pressure in accordance with the determined combustion air pressure.

33. The method of claim 32, wherein selecting the speed comprises:

selecting a turbine temperature in accordance with the selected speed to produce the required amount of power.

34. The method of claim of 33, wherein the turbine temperature is a turbine exhaust temperature.

35. The method of claim 20, wherein selecting the speed comprises:

A3 selecting a turbine temperature in accordance with the selected speed to produce the required amount of power.

36. The method of claim of 35, wherein the turbine temperature is a turbine exhaust temperature.

37. The method of claim 35, wherein selected the fuel pressure comprises:

determining a combustion air pressure provided by a turbogenerator air compressor to the combustor in accordance with the selected turbogenerator speed.

38. The method of claim 37, wherein selected the fuel pressure comprises:

selected the fuel pressure in accordance with the determined combustion air pressure.

39. The method of claim 38, wherein controlling the fuel pump comprises:

controlling a torque of the pump to provide the selected fuel pressure to the turbogenerator combustor.

40. The method of claim 38, wherein controlling the fuel pump comprises: